

ABSTRACT OF THE DISCLOSURE

5 A single chip direct conversion transceiver that includes a substrate on which
a mixer unit and a local oscillator are provided as a circuit, and a positive hole
formed between the mixer unit and the local oscillator and filled with a conductive
plug to block signal leakage. A shield ground surface is formed above the substrate
and blocks signal leakage occurring when the signals received through the antenna
are input into the mixer and signal leakage occurring when the reference signal is
10 input into the mixer from the local oscillator. A first interconnection is formed above
the shield ground surface and connects the mixer unit and the local oscillator.
Dielectric layers are formed between the substrate and the shield ground surface
and on the shield ground surface to cover the first interconnection.